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IGME-330 Project 1

Conway's Game of Life

This project expanded upon our class's implementation of Conway's Game of Life.

For the overall theme & impact category, the app has a basic, but clean theme highlighting the game of life grid. I gave each section some nice colors that help identify & distinguish different types of controls. The controls are I expanded upon our in-class implementation of Life by adding the ability to draw cells on the grid with the mouse, change the drawing of the cells to various shapes & images, and adjust almost all relevant parameters of the game. I would be happy to demonstrate this project as a basic example of JavaScript programming to a potential employer, especially since the codebase is fairly well structured & clean.

In the User Experience category, I would say that the purpose of the app, which is to experiment with various shapes on the game of life grid, is fairly obvious. All controls are labeled, and there is even an explanation under the drawing controls to ensure users are informed that they can draw on the grid with their mouse. There are no errors anywhere within the app. I added a description of the *Game of Life*, including the rules of the game that govern the actions of the cells during each redraw. This should help users have some idea of what is going on.

In the media category, I met all requirements, including validating my CSS / HTML code, using semantic HTML elements such as the <section> tags for controls,

use of a CSS grid to lay out the divs, all of which is in an external stylesheet (default-styles.css). I'm using Google's *Roboto* font, which is imported from Google Fonts. The only images on the page are used to draw the emoji theme, and they are scaled properly (10x10, 20x20 pixels to fit the grid). All drawing methods implement `canvas.save()` and `canvas.restore()`. Rectangles & arcs were drawn as cells on the grid, and lines were implemented by adding a grid columns & rows function as a checkbox on the play/pause controls. And of course, I used the Canvas API for all drawing of the game of life grid.

In the code category, I followed all file naming & code standards throughout the app. There are no uses of inline event handlers, and all code is either in *index.js* or my ES5 library, *txmLIB.js*.

If I had more time, I would have wanted to add a mobile-friendly CSS grid layout, and I plan to do this even after submission. This project inadvertently taught me how to use CSS grids, and I find them extremely useful now. I also would have wanted to modify the arrays that hold the life data in such a way that cells with different numbers of neighbors could be drawn differently, maybe with different colors. I would have created a 3d array with the existing X & Y coordinates, then with attributes so I could hold multiple pieces of information in each cell.